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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,841	10/08/2004	G. R. Mohan Rao	A4-1845	5840
27127 7590 04/25/2007 HARTMAN & HARTMAN, P.C. 552 EAST 700 NORTH VALPARAISO, IN 46383			EXAMINER LE, THONG QUOC	
			ART UNIT 2827	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE 3 MONTHS			MAIL DATE 04/25/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/711,841

Applicant(s)

RAO ET AL.

Examiner

Thong Q. Le

Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,3-21 and 23-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3-5,7-21,23-28,30 is/are allowed.
- 6) ☒ Claim(s) 6 and 29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. Amendment filed on 02/28/2007 has been entered.
2. Claims 1, 2-21,23-30 are presented for examination.

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 1,2-21,23-30 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 6 is rejected under 35 U.S.C. 102(e) as being anticipated by Bondurant et al. (U.S. Patent No. 6,151,236).

Regarding claim 6, Bondurant et al. disclose a semiconductor memory device (Figure 1) comprising a bank (Column 3, lines 26-33) with multiple pages, the device comprising means for keeping multiple pages open on the bank (Column 8, lines 1-4, Column 10, lines 40-42) a sense amplifier (Figure 1, 32) and a SRAM register (Figure 1, 14) coupled to the sense amplifier to provide low column access latency (Column 4, TABLE1 BW1# -- Column 5 TABLE1).

6. Claims 6, 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Gustavson et al. (U.S. Patent No. 6,442,644).

Regarding claim 6, Gustavson et al. disclose a semiconductor memory device (Figure 5A) comprising a bank (Figure 5A, BANK) with multiple pages (Figure 5A, PAGE 0-1023), the device comprising means for keeping multiple pages open on the bank (Column 34, lines 1-7), a sense amplifier (Column 45, lines 12-14) and a SRAM register (Column 34, lines 5-7, register access) coupled to the sense amplifier to provide low column access latency (Column 7, lines 31-50).

Regarding claim 29, Gustavson et al. disclose wherein the keeping means comprises latches (Figure 5B, 540, 595, Column 45, lines 24-38) coupled to the sense amplifier and operating in the storage of data read-from and written-to the sense amplifier.

***Allowable Subject Matter***

7. Claims 1,3-5,7-21,23-28,30 are allowed.
8. Claims 1,3-5,7-21,23-28,30 include allowable subject matter since the prior art made of record and considered pertinent to the applicant's disclosure does not teach or suggest the claimed limitations. Bondurant et al. (U.S. Patent No. 6,151,236), Gustavson et al. (U.S. Patent No. 6,442,644), and others, does not teach the claimed invention having a semiconductor memory device comprising a bank with multiple pages, the device comprising means for keeping multiple pages open on the bank, wherein the keeping means comprises latches coupled to a sense amplifier associated with the bank, wherein the keeping means is operative to post a precharge command immediately after a command for a first access of one of the multiple pages in

anticipation of a subsequent access of the page, the keeping means keeping the page open for a number of clock cycles and the precharge command causing a precharge operation to be executed after completion of the number of clock cycles, the latches operating in the storage of data read-from and written-to the sense amplifier.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q. Le whose telephone number is 571-272-1783. The examiner can normally be reached on 8:00am-5:00pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarabian Amir can be reached on 571-272-1852. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Thong Q. Le  
Primary Examiner  
Art Unit 2827

